

REMARKS

This Amendment is being filed in response to the Office Action mailed on May 2, 2007, which had been reviewed and carefully considered. Reconsideration and allowance of the present application in view of the amendments made above and the remarks to follow are respectfully requested.

In the Office Action, claims 1-4, 6-7 and 9-20 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 5,723,786 (Klapman). Claims 1-4, 6, 9-12, 16, 18 and 20 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 6,201,476 (Depeursinge). Further, claims 1-4, 6, 9-12, 15, 18 and 20 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by an article entitled "Context Awareness by Analyzing Accelerometer Data" (Randell). Claims 1, 6-7, 9 and 12-20 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 5,317,304 (Choi). Claims 1-4, 6, 9-12, 15-16, 18 and 20 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent Application Publication No. 2003/0014660 (Verplaetse).

It is respectfully submitted that claims 1-4, 6-7, 9-11 and 13-18 are patentable over Klapman, Depeursinge, Randell, Choi and Verplaetse for at least the following reasons.

On page 2 of the Final Office Action, third paragraph, it is stated that:

intended use of "measurement unit" and "processor" by using the word "operable" does not afford patentable weight.

Applicants respectfully disagree. However, to advance prosecution, "operable" has been changed to "configured" to more clearly define the present invention. It is respectfully submitted that a measurement unit "operable" or "configured" to operate the output channel discontinuously, as recited in independent claim 1, and similarly recited in independent claims 6, 9, 16 and 18, is not merely a statement of intended use. Rather, a measurement unit configured to operate the output channel discontinuously provides a functional limitation that should be accorded patentable weight.

It is well known that a functional limitation should be accorded patentable weight. (See, e.g., *Ex parte Sherman*, 45, USPQ 532, 534 (Pat. Off. Bd. App. 1939):

While the claims contain numerous functional statements, these statements seem to be used for the purpose of clearly defining or differentiating elements which have been positively included in the claims. We see no objection to the use of the functional statement to define an element, even where the element may be set forth by the term "means."

Accordingly, it is respectfully submitted that patentable weight be accorded to such features, such as the feature of claim 1 (with similar features in independent claims 6, 9, 16 and 18) of "the measurement unit is configured to operate the output channel discontinuously."

Klapman is directed to a boxing glove impact measuring system that includes a measuring device 14 shown in FIG 3. The measuring device 14 includes three accelerometers 18, 20, 22 that sense acceleration and provides sensing signals to a local processor 24. The local processor 24 is coupled to an RF transceiver 26 for wireless communication with a remote impact display unit 16. As recited on column 3, lines 58-62, the local processor 24 only transmits (to the remote impact display unit 16 via the RF transceiver 26) data which has changed since the last reading.

It appears that the Klapman processor 24 is continuously on to

read data (thus consuming battery power), and when a change in read data is detected, then the processor 24 transmits the data.

Transmitting only changed data to the remote impact display unit 16 reduces consumption of battery power. Further, on column 2, lines 58-61, Klapman teaches that "the three signals from the three accelerometers 18, 20, 22 are transceived over a single radio frequency channel that has been divided into three information channels" using time division multiplexing (TDM). That is, at best, Klapman teaches to only transmit changed data wirelessly to a remote device over a single radio frequency channel using TDM.

Depeursinge is directed to a device for monitoring the activity of a person and detecting a fall suffered by a person. The Depeursinge device generates acceleration, speed and/or position signals and establishes therefrom a probability factor representative of the probability that a dangerous situation is present. A danger signal is transmitted to a monitoring center based on the value of the probability factor. As shown in FIG 1, three accelerometers 2a, 2b and 2c measure the acceleration in XYZ directions and provide the measures data to a processor 6 on three

output lines. FIG 3 shows the processor 6 in greater detail, which includes a neural network unit 8 and integrator/comparator unit 9. As recited on column 4, line 8-11, both the neural network unit 8 and the integrator/comparator unit 9 may be placed in a standby mode, if no dynamic changes in the acceleration signals are detected. That is, units 8 and 9 of the processor 6 are placed in standby mode.

Randell is directed to context awareness by analyzing accelerometer data, where in a steady state, the main processor is switched off, but the sensors remain active. Randell appears to be concerned with a single accelerometer, although there are references to "sensors" in plural. Nevertheless, Randell is completely silent regarding any connection between the sensors and a processor and does not teach or suggest a single connection between a processor and a measuring unit.

Choi is directed to a microprocessor based motion-sensitive alarm that includes a motion sensor and an anti-tamper mechanism for sounding an alarm when the apparatus is tampered with. The motion sensor and anti-tamper sensor are coupled to a computer

which is in stand-by mode most of the time to conserve energy.

That is, it is the computer which is in the standby mode, and not the sensors. Further, as clearly shown in FIG 5, there are two connections between the processor 24 and the trigger circuit 23.

Verplaetse is directed to a PC card security system having an unauthorized movement detection subsystem including a single motion sensor, such as a single multi-axis accelerometer. As shown in FIG 3, and recited in paragraph [0036], a power management circuit 56 is interconnected between a battery 30 and the single accelerometer 36 and is designed to periodically power down the accelerometer 36 to save power. The processor 38 is programmed to activate power management circuit 56 to periodically supply power to the accelerometer 36 and the processor. A plurality of motion sensors is nowhere taught or suggested in Verplaetse, let alone a single connection to the processor.

It is respectfully submitted that Klapman, Depeursinge, Randell, Choi, Verplaetse, and combinations thereof, do not teach or suggest the present invention as recited in independent claim 1, and similarly recited in independent claims 6, 9, 16 and 18 which,

amongst other patentable elements, requires (illustrative emphasis provided) :

a processor connected to the measurement unit by a single output channel, the processor being configured to receive on the single output channel of the measurement unit the sensor signals from the measurement unit and operable to process the signals;

wherein the measurement unit is configured to operate the single output channel [of the measurement unit] discontinuously in time during output of each motion sensor output signal.

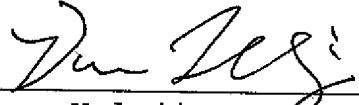
Accordingly, it is respectfully submitted that independent claims 1, 6, 9, 16 and 18 are allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 2-4, 7, 10-11, 13-15 and 17 should also be allowed at least based on their dependence from independent claims 1, 6, 9 and 16.

In addition, Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position,

should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

In view of the above, it is respectfully submitted that the present application is in condition for allowance, and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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